

Interactive comment on “Automated classification of Persistent Scatterers Interferometry time-series” by M. Berti et al.

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Dear Matteo,

Many thanks for your replies and feedback, as well as for this interesting scientific discussion.

1) Yes, I confirm that the computation of the Deviation Indexes requires the a priori inspection of at least a few time series for the identification of a break time t_b for the sub-sampling of the series in the historical and updated intervals. This means that the DIs can generally be used for event-driven impact assessment, i.e., when a certain event occurs at a certain date t_b over the monitored area. The DIs also facilitate the quantification of the occurred deviation in terms of (i) the variability of the series after

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t_b with respect to the trend before t_b (in the case of DI1); and (ii) the discontinuity or step (in mm) observed in the series at the time t_b (in the case of DI2). The DIs are however not limited only to local scale applications since, theoretically, the same event can affect wide areas and, consequently, large number of radar targets can be affected by similar trend changes in response to the same event (e.g., an entire region affected by sudden displacement triggered by the same cause or phenomenon). On the other hand, it is true that the application of PS-Time can, in that and other cases, help with the identification of the t_b by means of an automated process, as you noted. And I am looking forward to testing and applying it on other case studies, as I am confident it will be definitely helpful.

2-4) Thanks for agreeing on these aspects.

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